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The 1976 Iowa Corn Yield Test Report, District 1

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Abstract
Results of the Iowa Corn Yield Test are published to aid Iowa farmers in selecting corn varieties. This is the fifty-seventh consecutive year for the test.

Disciplines
Agriculture | Agronomy and Crop Sciences

IOWA STATE UNIVERSITY

AGRONOMY
• Crops
• Soils
• Climate

THE 1976 IOWA CORN YIELD TEST REPORT

District 1

Results of the Iowa Corn Yield Test are published to aid Iowa farmers in selecting corn varieties. This is the fifty-seventh consecutive year for the test.

The presentation of data for the varieties tested does not imply approval or endorsement by the authors or by the agencies sponsoring or conducting the test. Iowa State University approves the reproduction of any table in this report **only** if no portion is deleted and if the order of the data is not rearranged. Entries in tables 1 and 2 are designated by brand name and variety.

1976 Procedure

Producers of corn seed and Iowa State University were eligible to enter varieties in the Iowa Corn Yield Test. Each producer was allowed a maximum of nine entries per district. All entries had to be available in a quantity of at least 10 bushels.

One-hundred varieties were compared in this test. Two open-pedigree varieties were entered by Iowa State University from its corn breeding program. Twenty-four of the varieties were determined to be widely grown and were entered by Iowa State University. Varieties were considered widely grown if they were planted on 0.75 percent or more of the corn acreage in the district according to the 1974 survey of Iowa corn growers. Iowa State University entered a maximum of five widely grown varieties of any given brand. These entries were given priority over the remaining 74 entries made by seed producers.

Each entry was replicated four times in 4-row plots at a planting rate of 19,500 kernels per acre at each location. All locations were machine-planted. The center two rows of each plot were harvested with a corn combine. No gleanings or dropped ears were included in yield data. A moisture determination was made from each plot, and yields were corrected to 15.5-percent moisture for shelled corn.

How Information Is Presented

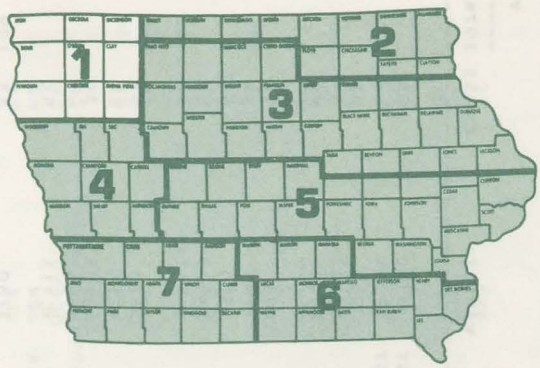
The data presented are averages of one location in 1974 and two locations in 1975 and 1976. Yield in bushels per acre and percentage of moisture, root lodging, dropped ears, and stand are shown for all varieties in 1976 and for varieties tested in 1974 and 1975 that were in the 1976 test.

Interpretation of Results

Yield differences due to variation in soil, fertility, moisture availability, insect infestation, and diseases, plus any variation due to planting and harvesting techniques, are identified through statistical analysis. The LSD values shown in tables 1 and 2 represent, in bushels per acre, the amounts of yield variation that could be due to variations in the factors just mentioned. In comparing varieties, yield differences greater than the LSD value can be attributed to genetic differences in the yield potential of these varieties; yield differences less than the LSD value are not statistically different and could have been due to other factors.

Grain moistures shown in tables 1 and 2 are indicators of maturity and natural drying rate. Maturity of varieties entered generally ranged from early to full season. Yield comparisons should be made among varieties of similar maturity.

Yield comparisons were made at one plant population that was similar to the moderate planting rate in the past years. It is important to select varieties having stable performance over a range of environmental conditions. High yields for two or more consecutive years indicate stable performance. Supplemental yield and agronomic information about specific varieties may be obtained from your seed corn dealers and from neighbors who have grown these varieties.



Prepared by William E. Falck, instructor in agronomy, and C. D. Hutchcroft, professor of agronomy and secretary of the Iowa Crop Improvement Association.

Cooperative Extension Service, Agriculture and Home Economics Experiment Station, Iowa Crop Improvement Association, and the United States Department of Agriculture cooperating

Cooperative Extension Service
IOWA STATE UNIVERSITY
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TABLE 1. AVERAGE PERFORMANCE OF VARIETIES TESTED IN DISTRICT 1.
MODERATE POPULATION - 19,400 PLANTING RATE. LSD FOR 1976 YIELD IN BUSHELS IS 15.

BRAND	VARIETY	CROSS	YIELD BU./A			MOISTURE PCT.			ROOT LODGING PCT.			STALK LODGING PCT.			DROPPED EARS PCT.			STAND PCT.		
			1974	1975	1976	1976	1975	1974	1976	1975	1974	1976	1975	1974	1976	1975	1974	1976	1975	1974
GOLDEN HARVEST	H2350	MS			106	16.9			0			3			0			84		
GOLDEN HARVEST	H2355	SX			101	17.0			0			4			0			82		
FS	096	MS		106	107	17.2	19.3		0	0		1	0		0	0		85	89	
SAR	SX102A	SX	100	115	110	17.2	19.0	16.9	0	1	0	5	1	2	0	0	0	88	92	95
SUPER CROST	1692	MS			110	17.5			0			3			0			85		
FS	095	SX			107	17.6			0			4			2			83		
*PIONEER	3785	SX		108	101	17.8	19.3		0	0		2	0		0	0		87	87	
HULTING	X310	SX		106	94	19.4	19.5		0	0		1	0		0	0		79	82	
*O'S GOLD	SX949	SX			115	19.7			0			1			0			79		
*FUNKS	G4321A	SX	100	137	112	19.8	22.1	21.0	0	0	0	6	0	1	0	0	0	85	93	93
PRIDE	5525	SX		118	104	19.8	24.1		0	0		4	0		0	0		86	83	
*DEKALB	XL16	SX			100	19.8			0			2			1			84		
AMES BEST	AB104	3X			114	19.9			0			2			1			93		
*PIONEER	3709	MS			113	19.9			0			1			0			91		
*DEKALB	XL21A	SX			114	20.0			0			2			0			93		
*PIONEER	3780	SX	109	119	119	20.0	23.0	18.1	0	0	0	3	0	0	1	0	0	89	91	96
TROJAN	TXS94	SX			112	20.2			0			3			0			81		
FUNKS	G4272	3X			114	20.2			0			2			1			86		
SUPER CROST	2350	SX			125	20.4			0			3			0			88		
GOLDEN HARVEST	H2370	SX		101	114	20.5	20.4		0	0		3	0		0	0		78	75	
MCCURDY	MSX46	SX	93	129	120	20.5	24.2	20.4	0	1	0	1	0	1	0	0	0	86	92	91
FEDERAL	FX6	SX	94	124	128	20.5	23.2	22.1	0	0	0	5	0	1	0	0	1	90	89	94
PFISTER	18	SX			121	20.6			0			3			0			84		
WILSON	2380	MS			110	20.7			0			3			0			86		
*NORTHRUP KING	PX46	SX		123	118	20.7	21.5		0	0		4	0		0	0		82	85	
ASGROW	RX60	SX			129	20.8			0			3			0			93		
ASGROW	RX2345	SX			119	20.8			0			4			0			75		
*PIONEER	3710	SX		114	113	20.9	21.6		0	0		1	0		0	0		90	80	
SECURITY	SS105	SX			96	21.0			0			4			0			83		
*FUNKS	G4444	SX	121	119	123	21.0	23.9	23.6	0	1	0	3	0	3	0	0	0	81	86	95
FS	444	SX			137	21.0			0			1			1			90		
*O'S GOLD	SX1107	MS			116	21.1			0			1			0			84		
*SAR	SX205	SX		123	111	21.2	24.9		0	0		4	0		0	0		86	90	
FS	223	SX		126	114	21.2	24.9		0	0		2	0		0	0		84	92	
IOWA STATE UNIV	(A632XA663)	SX			102	21.2			0			5			0			87		
MCCURDY	MSX42	SX	89	120	109	21.2	26.3	22.2	0	0	1	4	0	9	0	0	0	86	89	99
PRIDE	4404	SX			113	21.2			0			2			0			92		
*PAG	SX69	SX	108	122	110	21.3	26.2	23.8	0	1	2	4	0	1	0	0	0	77	83	93
ENO	SX14	SX	99	129	116	21.3	25.6	23.7	1	3	1	2	0	2	0	0	0	83	93	92
*BLANEY	B606	SX		129	123	21.3	23.9		0	0		3	0		0	0		78	93	
NC+	33SX	SX	112	125	106	21.4	24.2	22.9	0	5	5	4	0	4	0	0	0	84	89	96
ENO	3X35	3X	85	120	114	21.4	23.6	22.8	0	0	0	2	0	1	0	0	0	89	85	84
WILSON	1016	SX	103	118	113	21.4	23.8	22.4	0	1	6	2	0	1	0	0	0	90	82	87
SUPER CROST	2470	MS			112	21.5			0			3			0			86		
PFISTER	19	SX			118	21.5			0			3			0			84		
EMBRO	X40	SX			130	21.6			0			1			0			89		
COOP	2200	SX			107	21.6			0			3			0			79		
LYNKS	4200	SX	115	132	115	21.6	23.4	24.6	0	0	0	3	0	1	0	0	0	89	90	96
MELLOWDENT	216A	SX			123	21.6			0			6			0			85		
*PAG	SX397	SX	109	131	124	21.7	25.8	25.9	0	0	2	9	1	4	0	0	0	90	86	94
CURRY	SC142	SX	103	133	113	21.7	24.3	24.5	0	0	2	2	0	3	0	0	0	89	88	95
PFISTER	21	SX			125	21.7			0			3			0			92		
*SAR	SX200	SX	108	123	116	21.8	23.4	23.6	0	0	0	5	0	0	0	0	0	83	89	93
CORN KING	1122	SX	101	121	122	21.8	25.9	23.4	0	0	1	2	0	2	1	0	1	91	85	95
FEDERAL	FT23	3X			116	21.8			0			5			0			81		
WILSON	1400	SX		131	123	21.8	23.4		0	2		2	0		0	0		85	87	
AMES BEST	SX37	SX			121	21.9			0			3			0			85		
EMBRO	X2A	SX			101	21.9			0			4			0			82		
*O'S GOLD	SX1100	SX	112	116	104	22.0	23.8	23.1	0	0	2	5	0	1	0	0	0	88	90	100
*ASGROW	RX58	SX	108	127	117	22.0	25.1	23.8	0	2	2	3	0	2	0	0	0	87	87	97
PRIDE	5565	SX		114	106	22.0	22.2		0	0		2	0		0	0		86	88	
SAR	SX132A	SX	98	125	121	22.1	22.9	24.1	0	0	0	3	0	7	0	0	0	86	90	93
MCCURDY	MSX44A	SX	108	117	108	22.1	23.8	24.8	0	0	2	3	0	1	0	0	0	84	87	96
HULTING	X770	SX	95	138	112	22.2	25.5	23.8	0	0	4	8	0	3	0	0	0	79	93	88
GOLDEN HARVEST	H2450	SX	99	121	104	22.2	24.4	24.7	0	0	0	3	0	2	0	0	0	86	86	92
FONTANELLE	400SC	SX	102	129	104	22.2	24.5	23.4	0	0	2	5	0	1	1	0	0	80	90	93
PRAIRIE VALLEY	21S	SX		128	111	22.2	24.8		0	1		3	1		0	1		85	93	
TEKSEED	SPX1A	SX		122	114	22.2	24.5		0	1		6	0		0	0		84	85	
*TROJAN	TXS102	SX	108	132	112	22.3	24.8	23.6	0	0	5	1	0	0	0	0	0	85	91	97
TEKSEED	SPX8	SX		131	98	22.3	25.4		0	0		3	0		0	0		84	91	
COOP	2201	SX			119	22.5			0			5			0			80		
FONTANELLE	440SC	MS			107	22.5			0			2			0			98		
CURRY	SC141	SX			124	22.6			0			1			1			79		
*DEKALB	XL43	SX	108	123	121	22.8	28.2	24.4	0	0	0	2	0	11	0	0	0	85	89	100
*ACCO	UC3301	SX	83	128	124	22.8	24.6	25.8	0	0	1	3	0	1	0	0	0	82	87	91
*NORTHRUP KING	PX50A	SX	88	120	119	22.8	24.9	24.4	0	1	0	3	1	4	0	0	0	86	84	97
CARGILL	875	SX		123	110	22.9	24.5		0	0		6	0		0	0		83	89	
CROWS	226	SX		115	115	23.1	24.8		0	0		5	0		0	0		89	84	
KALTENBERG	KX68	SX			81	23.1			0			0			0			70		
*TROJAN	TXS108A	SX	94	132	106	23.2	27.7	24.1	0	0	0	2	0	2	0	0	0	87	89	92
PAG	SX424	SX		124	117	23.2	29.0		0	1		4	0		0	0		83	90	
PFISTER	21A	SX			118	23.3			0			3			0			88		
PRAIRIE VALLEY	25M	MS			110	23.5			0			4			0			80		
ACCO	UC4201	SX			125	23.6			0			4			0			87		
IOWA STATE UNIV	(A632XH99)	SX		133	121	23.7	25.6		0	0		4	0		0	0		86	89	
HULTING	X322	SX	95	128	117	23.7	27.5	24.3	0	0	0	4	0	10	0	0	0	81	84	93
CARGILL	890	SX	87	118	133	23.8	26.0	24.2	0	0	1	7	1	18	0	0	0	87	91	90
FEDERAL	490	4X			112	23.9			0			5			0			81		
TEKSEED	SPX12	SX			114	24.2			0			5			0			83		
*DEKALB	XL54	SX		125	139	24.2	28.1		0	0		6	0		0	0		88	82	
ACCO	UC3601	SX	107	129	109	24.3	29.6	25.7	0	0	2	5	0	2	0	0	0	89	91	91
ACCO	UC6601	SX			126	24.6			0			6			0			88		
FUNKS	G4449	SX			120	24.6			0			1			0			92		
CARGILL	920	SX		132	125	24.8	28.7		0	0		7	1		0	0		89	83	
CURRY	SC147	SX			135	24.9			0			4			0			84		
KALTENBERG	KX76	SX			140	25.0			0			3			0			94		
*DEKALB	XL64	SX	106	132	127	25.5	29.9	26.7	0	0	0	7	0	15	0	0	0	88	88	96
MELLOWDENT	220	SX			119	27.3			0			3			0			82		
PRAIRIE VALLEY	76S	SX			142	28.1			0			5			1			89		
MELLOWDENT	225	SX			126	28.7			0			2			0			83		
AVERAGE OF ALL ENTRIES			101.3	123.4	115.3	21.8	24.5	23.4	0.0	0.4	1.2	3.4	0.1	3.5	0.1	0.0	0.0	85.3	87.8	93.8

SX = SINGLE CROSS. MS = MODIFIED SINGLE CROSS. 3X = 3-WAY CROSS. 4X = 4-WAY CROSS.
*WIDELY GROWN VARIETY.

1976 Field Data

The District 1 test was conducted on farms operated by William Morris near Sheldon in Sioux County and by Raymond Paulsen near Everly in Clay County. The field data are presented in Table A.

Subsoil mosture was adequate at planting time. Rainfall was normal during May and June, below normal during July and September, and about normal during August. Temperatures were above normal during May, June, July, August, and September. Yield levels were above normal in the district.

Table A. Field Data

	Morris Farm Marcus silty clay loam			Paulsen Farm Primghar silty clay loam		
Fertilizer applied, lbs.	N	P_2O_5	K_2O	N	P_2O_5	K_2O
Plowdown	0	50	30	100	60	60
Preplant	120	—	—	80	—	—
TOTAL	120	50	30	180	60	60
1975 Crop		Soybeans			Soybeans	
Row Width		30 inches			30 inches	
Planting date		April 27			April 30	
Harvest date		Oct. 6			Oct. 5	

District 1
Designations Identifying Brands in the Yield Test

Designation	Name and Address
*ACCO	ACCO Seed Div. of Anderson, Clayton & Co., Belmond, Ia. 50421
Americana	Americana Seeds, Muscatine, Ia. 52761
Ames Best	Ames Best Hybrids, Ames, Ia. 50010
*Asgrow	Asgrow Seed Company, Des Moines, Ia. 50310
*Blaney	Blaney Farms, Inc., Madison, Wis. 53713
Cargill	Cargill, Inc., Minneapolis, Minn. 55402
Coop	Farmland Industries, Inc., Kansas City, Mo. 64116
Corn King	Malcolm H. Grieve, Pierson, Ia. 51048
*Crow's	Crow's Hybrid Corn Co., Milford, Ill. 60953
Curry	Curry Seed Co., Elk Point, S.D. 57025
*DeKalb	DeKalb Ag. Research, Inc., DeKalb, Ill. 60115
Embro	Ramy Seed Co., Mankato, Minn. 56001
Eno	Eno Farms, Inc., Sheffield, Ia. 50475
Federal	Federal Hybrids, Marion, Ia. 52302
Fontanelle	Fontanelle Hybrids, Nickerson, Neb. 68044
F.S.	F.S. Services, Inc., Bloomington, Ill. 61701
*Funks	Funk Seeds International, Inc., Bloomington, Ill. 61701
Golden Harvest	The J.C. Robinson Seed Co., Waterloo, Neb. 68069
Hulting	Hulting Hybrids, Div. of Ferry-Morse, Geneseo, Ill. 61254
Iowa State University	Department of Agronomy, Ia. State University, Ames, Ia. 50011
Kaltenberg	Kaltenberg Seed Farms, Waunakee, Wis. 53597
Lynks	Lynk Bros. & Baird, Inc., Marshalltown, Ia. 50158
McCurdy	McCurdy Seed Co., Fremont, Ia. 52561
Mellowdent	Mellowdent Industries, Inc., Alta, Ia. 51002
NC+	NC+ Hybrids, Lincoln, Neb. 68054
*Northrup King	Northrup King & Co., Minneapolis, Minn. 55413
*O's Gold	O's Gold Seed Co., Parkersburg, Ia. 50665
*PAG	PAG Seeds, Minneapolis, Minn. 55402
Pfister	Pfister Hybrid Corn Co., El Paso, Ill. 61738
*Pioneer	Pioneer Hi-Bred International, Inc., Des Moines, Ia. 50308
Prairie Valley	Prairie Valley, Inc., Phillips, Neb. 68865
Pride	Pride Company, Inc., Glenn Haven, Wis. 58810
*Sar	Sar Seed Farms, Charles City, Ia. 50616
Security	Security Seed Co., Williamsburg, Ia. 52361
Super Crost	Edward J. Funk & Sons, Inc., Kentland, Ind. 47951
Tekseed	Tekseed Hybrid Co., Tekamah, Neb. 68061
*Trojan	Pfizer Genetics, Inc., Olivia, Minn. 56277
Wilson	Wilson Hybrids, Inc., Harlan, Ia. 51537

*Widely grown entries made by Iowa State University.

TABLE 2. AVERAGES OF 1975-76 AND 1974-76 OF VARIETIES TESTED IN DISTRICT 1. LSD FOR YIELDS ARE 9 BUSHELS FOR 74-76 AND 11 BUSHELS FOR 75-76.

BRAND	VARIETY	CROSS	YIELD BU./A 74-76	YIELD BU./A 75-76	MOISTURE PCT. 75-76	MOISTURE PCT. 74-76
SAR	SX102A	SX	108	112	18.1	17.7
FS	096	MSX		106	18.2	
*PIONEER	3795	SX		104	18.5	
HULTING	X310	SX		100	19.4	
GOLDEN HARVEST	H2170	SX		107	20.5	
*FUNKS	G4321A	SX	116	124	20.9	20.9
*NORTHRUP KING	PX46	SX		120	21.1	
*PIONEER	3710	SX		113	21.3	
*PIONEER	3740	SX	115	119	21.5	20.4
FEDERAL	FX6	SX	115	126	21.8	21.9
PRIDE	5525	SX		111	21.9	
PRIDE	5565	SX		110	22.1	
MCCURDY	MSX46	SX	114	124	22.3	21.7
*FUNKS	G4444	SX	121	121	22.5	22.9
LYNKS	4200	SX	120	123	22.5	23.2
ENO	3X15	3X	106	117	22.5	22.6
SAR	SX132A	SX	114	123	22.5	23.0
WILSON	1400	SX		127	22.6	
WILSON	1016	SX	111	115	22.6	22.5
*SAR	SX200	SX	115	119	22.6	22.9
*BLANEY	B606	SX		126	22.6	
NC+	335X	SX	114	115	22.8	22.8
*O'S GOLD	SX1100	SX	110	110	22.9	22.9
MCCURDY	MSX44A	SX	111	112	22.9	23.6
CURRY	SC142	SX	116	123	23.0	23.5
FS	222	SX		120	23.0	
*SAR	SX205	SX		117	23.1	
GOLDEN HARVEST	H2450	SX	108	112	23.3	23.8
TEKSEED	SPX1A	SX		118	23.3	
FONTANELLE	400SC	SX	111	116	23.3	23.4
*TROJAN	TXS102	SX	117	122	23.5	23.6
PRAIRIE VALLEY	215	SX		119	23.5	
*ASGROW	RX58	SX	117	122	23.5	23.6
ENO	SX14	SX	114	122	23.5	23.5
*PAG	SX69	SX	113	116	23.7	23.8
MCCURDY	MSX42	SX	106	114	23.7	23.2
*ACCO	UC3301	SX	111	126	23.7	24.4
CARGILL	875	SX		116	23.7	
TEKSEED	SPX8	SX		114	23.8	
*PAG	SX197	SX	121	127	23.8	24.5
CORN KING	1122	SX	114	121	23.9	23.7
*NORTHRUP KING	PX50A	SX	109	119	23.9	24.1
HULTING	X770	SX	115	125	23.9	23.8
CROWS	226	SX		115	23.9	
IOWA STATE UNIV	(A632xH99)	SX		127	24.6	
CARGILL	890	SX	112	125	24.9	24.7
*TROJAN	TXS108A	SX	110	119	25.4	25.0
*DEKALB	XL43	SX	117	122	25.5	25.1
HULTING	X322	SX	113	122	25.6	25.2
PAG	SX424	SX		120	26.1	
*DEKALB	XL54	SX		132	26.2	
CARGILL	920	SX		128	26.7	
ACCO	UC3601	SX	115	119	26.9	26.5
*DEKALB	XL64	SX	121	129	27.7	27.4

OTHER REPORTS

Separate reports for variety performance are available for each district shown in fig. 1. These publications are available at your county extension office or from Publications Distribution, Printing and Publications Building, Iowa State University, Ames, Iowa 50011.

The 1976 Iowa Corn Yield Test Report:
Pm-660-1-76 District 1
Pm-660-2-76 District 2
Pm-660-3-76 District 3
Pm-660-4-76 District 4
Pm-660-5-76 District 5
Pm-660-6-76 District 6
Pm-660-7-76 District 7

File: Agronomy 1

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